ELSEVIER

Wear 191 (1996) 281

WEAR

Author Index of Volume 191

Abe, N., 65
Aknin, P., 126
Allen, R.J., 45
Alp, A., 261

Bastias, P.C., 237
Baumann, G., 133
Bettembourg, J.P.J., 126
Blevins, B., 210
Bogdański, S., 14
Bold, P.E., 45
Brown, M.W., 45

Caldwell, W.N., 210
Cannon, D.F., 1
Chiang, F.-P., 90
Clayton, P., 170
Czarnek, R., 95

DiBrito, D., 204

Erdemir, A., 261

Farris, T.N., 226
Fecht, H.J., 133

Grassie, S.L., 149, 245
Gray, D.E., 25
Gupta, V., 237

Hahn, G.T., 237
Hempelmann, K., 161

Ishida, M., 65

Jiang, Y., 35

Kageyama, H., 141
Kalker, J.J., 184
Kalousek, J., 210, 252
Kanevsky, G., 210
Kapoor, A., 256
Karmowski, W., 78
Keer, L.M., 219
Kikuchi, A., 141
Knothe, K., 161
Komine, H., 72
Kondo, K., 199
Korpanec, I., 121
Kumar, S., 261
Kuroki, T., 141

Li, Z., 242
Liebelt, S., 133
Lovette, M., 113

Mace, S., 204
Magel, E., 210
Magiera, J., 78
Matsumoto, A., 101
Moran, B., 219
Mulder, J.M., 107
Muster, H., 54

Nakata, M., 101

Olzak, M., 14
Orkisz, J., 78, 188
Orringer, O., 25

Pascal, J.P., 126
Paxton, W.R., 25
Pena, R., 204
Périard, F., 184
Pradier, H., 1, 54, 121
Prasil, B., 126

Qi, K., 101

Raj, P.K., 25
Rippeth, D., 252
Rubin, C.A., 237

Sato, Y., 101, 199
Schmedders, H., 54
Sehitoglu, H., 35
Shen, X., 90
Shen, Z., 242
Simmons, J., 252
Skrzat, A., 188
Strasser, J., 210
Stupnicki, J., 14
Suda, Y., 72
Sugino, K., 141

Tanimoto, M., 101
Thelen, G., 113
Tournay, H.M., 107

Urashima, C., 141

Wang, Y., 90
Wick, K., 54
Williams, J.A., 256
Wilson, N., 204
Wong, S.L., 45

Yoroizaka, K., 199
Yu, C.-C., 219

Elsevier Science S.A.

ELSEVIER

Wear 191 (1996) 283–286

WEAR

Subject Index of Volume 191

Accumulated surface displacement
rolling contact stress analysis with the application of a new plasticity model, 35
Amorphous noise
wheel–rail noise: impact, random, corrugation and tonal noise, 184

Brakeshoe metal pick-up
tribological interrelationship of seasonal fluctuations of freight car wheel wear, contact fatigue shelling and composition brakeshoe consumption, 210

Combating wear
the transition from the wear to the stress regime, 107
CONTACT
a fast non-steady state creep force model based on the simplified theory, 242
Contact fatigue
tribological interrelationship of seasonal fluctuations of freight car wheel wear, contact fatigue shelling and composition brakeshoe consumption, 210
effect of overlapping wheel passages on residual stress in rail corners, 226
Contact mechanics
numerical stress analysis of rail rolling contact fatigue cracks, 14
an extended linear model for the prediction of short pitch corrugation, 161
Contact stresses
the transition from the wear to the stress regime, 107
Contact vibration
contact vibration with high damping alloy, 72
Corrugation
contact vibration with high damping alloy, 72
wheel–rail contact mechanics at full scale on the test stand, 101
an extended linear model for the prediction of short pitch corrugation, 161
wheel–rail noise: impact, random, corrugation and tonal noise, 184
Cracks
residual stress and its consequences on both sides of the wheel–rail interface, 25
a branch criterion for shallow angled rolling contact fatigue cracks in rails, 45
Creep characteristics
wheel–rail contact mechanics at full scale on the test stand, 101
Curve shrieking
wheel–rail noise: impact, random, corrugation and tonal noise, 184
Cyclic quantities
elastic–plastic rolling–sliding contact on a quarter space, 219

Damage
rail rolling contact fatigue Research by the European Rail Research Institute, 1
Damping
contact vibration with high damping alloy, 72

Derailments
a case study of the effect of lubrication and profile grinding on low rail roll-over derailments at CSX transportation, 252
Different grades
rail rolling contact fatigue. The performance of naturally hard and head-hardened rails in track, 54
Direct method
elastic–plastic rolling–sliding contact on a quarter space, 219
Dissection
new experimental approach for studying residual stresses in rails, 90

Elastic–linear kinematic
elastic–plastic rolling–sliding contact on a quarter space, 219
Energy savings
energy and wear analysis in lubricated sliding contact, 261
ERRI research programme
practical implementation of results of ORE–ERRI research on wheel–rail contact interaction on the European railways, 121
Experimental data smoothing
reconstruction of residual stresses in railroad vehicle wheels based on enhanced saw cut measurements, formulation and benchmark tests, 188
Experimental methods
reconstruction of residual stresses in railroad rails from measurements made on vertical and oblique slices, 78

Failure
rail rolling contact fatigue Research by the European Rail Research Institute, 1
FASTSIM
a fast non-steady state creep force model based on the simplified theory, 242
Fatigue
rail rolling contact fatigue Research by the European Rail Research Institute, 1
a branch criterion for shallow angled rolling contact fatigue cracks in rails, 45
metallurgical investigation of transverse defects in worn rails in service, 141
tribological aspects of wheel–rail contact: a review of recent experimental research, 170
Fatigue cracks growth
numerical stress analysis of rail rolling contact fatigue cracks, 14
Fatigue defects
rail rolling contact fatigue. The performance of naturally hard and head-hardened rails in track, 54
FEM
effect of overlapping wheel passages on residual stress in rail corners, 226
FEM contact models
numerical stress analysis of rail rolling contact fatigue cracks, 14
Finite element
elastic–plastic rolling–sliding contact on a quarter space, 219

Elsevier Science S.A.

Finite element analysis
calculations of the frictional heating of a locomotive wheel attending rolling plus sliding, 237
Formation mechanism
wheel–rail contact mechanics at full scale on the test stand, 101
Friction
energy and wear analysis in lubricated sliding contact, 261
Frictional heating
calculations of the frictional heating of a locomotive wheel attending rolling plus sliding, 237
Friction control
tribological aspects of wheel–rail contact: a review of recent experimental research, 170
Fuel Savings
a parametric study of the lubrication transport mechanism at the rail–wheel interface, 113

Gage widening
effects of wheel–rail contact geometry on wheel set steering forces, 204
Grinding
cause, increase, diagnosis, countermeasures and elimination of Shinkansen shelling, 199

Hardening mechanism
formation of white-etching layers on rail treads, 133
High damping alloy
contact vibration with high damping alloy, 72
Hollow worn wheels
effects of wheel–rail contact geometry on wheel set steering forces, 204

Impact noise
wheel–rail noise: impact, random, corrugation and tonal noise, 184
Inclusion
metallurgical investigation of transverse defects in worn rails in service, 141
Interfacial layer
tribological interrelationship of seasonal fluctuations of freight car wheel wear, contact fatigue shelling and composition brakeshoe consumption, 210
Interferometry
development and application of an improved method for experimental determination of release fields in cut railroad car wheels, 95
Inverse problem
reconstruction of residual stresses in railroad vehicle wheels based on enhanced saw cut measurements, formulation and benchmark tests, 188

Kalker's simplified theory
a fast non-steady state creep force model based on the simplified theory, 242

Liquid trapped in a crack
numerical stress analysis of rail rolling contact fatigue cracks, 14
Locomotive hunting
contribution of railway dynamics codes to the understanding of the metallurgical behavior of the rail tread, 126
Locomotives
short wavelength rail corrugation: field trials and measuring technology, 149
Locomotive wheel
calculations of the frictional heating of a locomotive wheel attending rolling plus sliding, 237
Lubricant ranking
energy and wear analysis in lubricated sliding contact, 261
Lubrication
a parametric study of the lubrication transport mechanism at the rail–wheel interface, 113
a case study of the effect of lubrication and profile grinding on low rail roll-over derailments at CSX transportation, 252
energy and wear analysis in lubricated sliding contact, 261

Maintenance procedures
the transition from the wear to the stress regime, 107
Measuring technology
short wavelength rail corrugation: field trials and measuring technology, 149
Mechanical alloying
formation of white-etching layers on rail treads, 133
Metallurgy
short wavelength rail corrugation: field trials and measuring technology, 149
Moiré interferometry
new experimental approach for studying residual stresses in rails, 90

Non-dissection
new experimental approach for studying residual stresses in rails, 90
Nonlinear optimization
reconstruction of residual stresses in railroad rails from measurements made on vertical and oblique slices, 78
Non-steady state creep
a fast non-steady state creep force model based on the simplified theory, 242
NOS
a fast non-steady state creep force model based on the simplified theory, 242
Numerical Methods
reconstruction of residual stresses in railroad rails from measurements made on vertical and oblique slices, 78
Numerical simulation
reconstruction of residual stresses in railroad rails from measurements made on vertical and oblique slices, 78

Pin displacement
energy and wear analysis in lubricated sliding contact, 261
Pin-on-disk
energy and wear analysis in lubricated sliding contact, 261
Plastic deformation
formation of white-etching layers on rail treads, 133
Plasticity
effect of overlapping wheel passages on residual stress in rail corners, 226
Plasticity model
rolling contact stress analysis with the application of a new plasticity model, 35
Point contacts
shakedown limits in rolling–sliding point contacts on an anisotropic half-space, 256
Profile grinding
a case study of the effect of lubrication and profile grinding on low rail roll-over derailments at CSX transportation, 252

Quarter-space
elastic–plastic rolling–sliding contact on a quarter space, 219

Rail
rail rolling contact fatigue Research by the European Rail Research Institute, 1
a parametric study of the lubrication transport mechanism at the rail–wheel interface, 113
metallurgical investigation of transverse defects in worn rails in service, 141

Rail breakage
cause, increase, diagnosis, countermeasures and elimination of Shinkansen shelling, 199
Rail corrugation
formation of white-etching layers on rail treads, 133
short wavelength rail corrugation: field trials and measuring technology, 149
measurement of railhead longitudinal profiles: a comparison of different techniques, 245
Rail defects
residual stress and its consequences on both sides of the wheel–rail interface, 25
Rail fatigue
contribution of railway dynamics codes to the understanding of the metallurgical behavior of the rail tread, 126
Rail grinding
effects of wheel–rail contact geometry on wheel set steering forces, 204
Rail measurement
measurement of railhead longitudinal profiles: a comparison of different techniques, 245
Rail measuring equipment
measurement of railhead longitudinal profiles: a comparison of different techniques, 245
Rail profile
measurement of railhead longitudinal profiles: a comparison of different techniques, 245
Railroad car wheels
development and application of an improved method for experimental determination of release fields in cut railroad car wheels, 95
Railroad rails
reconstruction of residual stresses in railroad rails from measurements made on vertical and oblique slices, 78
Railrod vehicle wheel
reconstruction of residual stresses in railroad vehicle wheels based on enhanced saw cut measurements, formulation and benchmark tests, 188
Rails
a branch criterion for shallow angled rolling contact fatigue cracks in rails, 45
rail rolling contact fatigue. The performance of naturally hard and head-hardened rails in track, 54
Railway
wheel–rail contact mechanics at full scale on the test stand, 101
Railway rail
experimental study on rolling contact fatigue from the aspect of residual stress, 65
Railways
measurement of railhead longitudinal profiles: a comparison of different techniques, 245
Rail–wheel contact
tribological aspects of wheel–rail contact: a review of recent experimental research, 170
shakedown limits in rolling–sliding point contacts on an anisotropic half-space, 256
Rail–wheel interaction
the transition from the wear to the stress regime, 107
Ratchetting
rolling contact stress analysis with the application of a new plasticity model, 35
Release fields
development and application of an improved method for experimental determination of release fields in cut railroad car wheels, 95
Residual stress
residual stress and its consequences on both sides of the wheel–rail interface, 25
rolling contact stress analysis with the application of a new plasticity model, 35
experimental study on rolling contact fatigue from the aspect of residual stress, 65
reconstruction of residual stresses in railroad rails from measurements made on vertical and oblique slices, 78
development and application of an improved method for experimental determination of release fields in cut railroad car wheels, 95
effect of overlapping wheel passages on residual stress in rail corners, 226
Residual stresses
new experimental approach for studying residual stresses in rails, 90
reconstruction of residual stresses in railroad vehicle wheels based on enhanced saw cut measurements, formulation and benchmark tests, 188
Rolling
calculations of the frictional heating of a locomotive wheel attending rolling plus sliding, 237
Rolling contact
rolling contact stress analysis with the application of a new plasticity model, 35
a branch criterion for shallow angled rolling contact fatigue cracks in rails, 45
contact vibration with high damping alloy, 72
Rolling contact fatigue
numerical stress analysis of rail rolling contact fatigue cracks, 14
experimental study on rolling contact fatigue from the aspect of residual stress, 65
Rolling–sliding
elastic–plastic rolling–sliding contact on a quarter space, 219

Semi-analytical approach
rolling contact stress analysis with the application of a new plasticity model, 35
Shakedown
shakedown limits in rolling–sliding point contacts on an anisotropic half-space, 256
Sharp curve
wheel–rail contact mechanics at full scale on the test stand, 101
Shell
metallurgical investigation of transverse defects in worn rails in service, 141
Shelling
cause, increase, diagnosis, countermeasures and elimination of Shinkansen shelling, 199
Shinkansen
cause, increase, diagnosis, countermeasures and elimination of Shinkansen shelling, 199
Sliding
calculations of the frictional heating of a locomotive wheel attending rolling plus sliding, 237
Squat
cause, increase, diagnosis, countermeasures and elimination of Shinkansen shelling, 199
Squat formation
contribution of railway dynamics codes to the understanding of the metallurgical behavior of the rail tread, 126
Strain hardening
shakedown limits in rolling–sliding point contacts on an anisotropic half-space, 256
Stress analysis
metallurgical investigation of transverse defects in worn rails in service, 141
Stress intensity factors
numerical stress analysis of rail rolling contact fatigue cracks, 14

Structural dynamics
an extended linear model for the prediction of short pitch corrugation, 161

Tangential force
experimental study on rolling contact fatigue from the aspect of residual stress, 65
Transport Mechanism
a parametric study of the lubrication transport mechanism at the rail–wheel interface, 113
Transverse defects (or detail fracture)
metallurgical investigation of transverse defects in worn rails in service, 141
Tread wear
tribological interrelationship of seasonal fluctuations of freight car wheel wear, contact fatigue shelling and composition brakeshoe consumption, 210
Tribo-reduction
tribological interrelationship of seasonal fluctuations of freight car wheel wear, contact fatigue shelling and composition brakeshoe consumption, 210
Truck shear
effects of wheel–rail contact geometry on wheel set steering forces, 204

Ultrasonic
cause, increase, diagnosis, countermeasures and elimination of Shinkansen shelling, 199

Wear
rail rolling contact fatigue. The performance of naturally hard and head-hardened rails in track, 54
a parametric study of the lubrication transport mechanism at the rail–wheel interface, 113
an extended linear model for the prediction of short pitch corrugation, 161
tribological aspects of wheel–rail contact: a review of recent experimental research, 170
Wheel
a parametric study of the lubrication transport mechanism at the rail–wheel interface, 113
Wheel and rail profiles
effects of wheel–rail contact geometry on wheel set steering forces, 204
Wheel–rail contact
wheel–rail contact mechanics at full scale on the test stand, 101
practical implementation of results of ORE–ERRI research on wheel–rail contact interaction on the European railways, 121
Wheel–rail interface
residual stress and its consequences on both sides of the wheel–rail interface, 25
Wheel–rail noise
wheel–rail noise: impact, random, corrugation and tonal noise, 184
Wheel set steering
effects of wheel–rail contact geometry on wheel set steering forces, 204
Wheel shelling
tribological interrelationship of seasonal fluctuations of freight car wheel wear, contact fatigue shelling and composition brakeshoe consumption, 210
White etching layer
formation of white-etching layers on rail treads, 133